

REMARKS

The June 3, 2008 Office Action regarding the above-identified application has been carefully considered. The claim amendments above together with the remarks that follow are presented in a bona fide effort to respond thereto and address all issues raised in that Action.

In view of recent new precedents regarding patentable subject matter issues under 35 U.S.C. § 101, such as *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (*en banc*), Applicants have revised claim 6 and the claims dependent therefrom to make clear that those claims relate to machine type subject matter. More specifically, claims 6-13 have been amended to refer to a “rules engine computer system.” The Field of the Invention in the original specification indicated that the “invention disclosed herein relates to computer systems and, more particularly, to rules-based systems for order execution and asset movement processing.” The computer system recited in claim 6 includes an interface, a storage medium, and an order/transaction processing section having access to the storage medium. Application FIG. 2, for example, shows a communication interface 240, the rules storage 200 and an order/transaction processing section 230. It is respectfully submitted that claim 6 and its dependents clearly recite ‘machine’ type subject matter, which is patentable under 35 U.S.C. § 101. New claims 31-40 are drafted in a similar format and should similarly fall into the ‘machine’ subject matter category permitted under 35 U.S.C. § 101.

Independent claim 6 has been amended to clarify that the rules based processing encompasses processing of requested orders or asset transfers. Support for the order and asset transfer recitations should be readily apparent from the original disclosure (see for example the first sentence of the abstract). Independent claim 6 also has been amended to clarify that the order/transaction processing section applies at least one of the rules to each respective received

transaction based on source and level of the respective received transaction being within the specified scope assigned to each applied rule. The claim previously referred to “source” and “level” in a somewhat different fashion. Support for the recitations regarding level of the rules and the application for rules of different levels to the transactions should be readily apparent from the original disclosure (see for example paragraphs 0040-0041 and 0057 of the present application as published).

To help further distinguish over the art, independent claim 6 also has been amended to specify processing of multiple transactions and two of the different outcomes that apply to different orders contained in transactions based on the applications of one or more rules to each transaction. Hence, in amended claim 6, upon determining to automatically approve execution of the requested order or asset transfer contained in a first received transaction, based on rule application, the order/transaction processing section forwards the order or asset transfer in the request contained in the first received transaction to an execution process for fulfillment. By contrast, the application of one or more of the rules to a second received transaction indicates a manual user approval is required for execution of the order or asset transfer, in the request contained in that second transaction. In the case of this second transaction, the order/transaction processing section forwards the request for the order or asset transfer contained in the second received transaction to a user for possible manual approval for execution for fulfillment. Support for these execution or approval-required processing recitations appears for example, in paragraph 0057 of the present application as published (2003/0167219).

Method claims 16 and 17 have been cancelled to reduce art issues and avoid possible new issues regarding patentable subject matter. Claim 22 also has been cancelled to reduce issues.

New claims 29 and 30 depend from system claim 6 and add further requirements relating to two other possible outcomes (warning and ‘stop’ execution) based on the rules application, for the order processing function of the order/transaction processing section, as shown in FIG. 9 and described in paragraph 0057 of the present application as published.

Claim 24 has been cancelled and replaced with a new system claim 31. Like 24, new system claim 31 recites that the rule has an assigned outcome selected from a plurality of preset outcomes and the assigned outcome is adjustable from a first one of the plurality of preset outcomes to a second one of the plurality of preset outcomes based on user setting. Other aspects of claim 31, however, are similar in format and scope to some of the recitations of amended claim 6. For example, claim 31 relates to a rules engine computer system, and the order/transaction processing section determines the outcome of order processing (e.g. automatic approval for order execution/fulfillment or manual approval required) based on application of one or more of the rules. Hence, claim 31 should find ample support in the original disclosure for much the same reasons as previous claim 24 and amended claim 6.

New claims 32-40 are similar to claims 7-13, 29 and 30, except that 32-40 depend from claim 31. Like claims 7-13, 29 and 30, new claims 32-40 should find ample support in the original disclosure.

For the reasons outlined above, the claim amendments should not introduce new subject matter or raise any concern with regard to adequacy of the disclosure in support of the amended claim scope. As discussed in more detail, later, it is believed that the pending claims are free of the art applied in the latest Action and should be in condition for allowance. Prompt favorable reconsideration of this amended application is requested.

Summary of Office Action

The issues raised in the latest Office Action all concerned patentability of the previous claims over art. The Office Action included a rejection of claims 6, 16, 17, 22 and 24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,978,779 to Stein et al (hereinafter Stein). The previous versions of claims 7-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stein in view of Official Notice, now referred to as allegedly admitted prior art. These rejections are traversed.

Patentability

It is respectfully submitted that the pending claims patentably distinguish over Stein, whether taken alone or modified in view of Official Notice. Applicants further submit that the rejections do not provide the requisite evidence or rationale for a prima facie case of obviousness and therefore are improper and should be withdrawn. For at least these reasons, pending claims 6-13 and 29-40, should be patentable over the art applied in the latest Office Action. A more detailed explanation of these points follows.

As noted above, each of the amended independent claims recites an order/transaction processing section. As claimed, this section applies at least one of the rules to the each respective received transaction, specifically, to determine whether or not to execute the order or asset transfer as requested in the respective received transaction. The order/transaction processing section forwards the order or the asset transfer in the request contained in the first received transaction to an execution process for fulfillment when application of one or more of the rules to the request for the order or asset transfer in the first received transaction results in a determination to automatically approve execution of the requested order or asset transfer. The order/transaction processing section, however, forwards the request for the order or the asset transfer contained in the second received transaction to a user for possible manual approval for

execution for fulfillment, upon rules application to that transaction indicating a manual user approval is required for execution of that order or asset transfer.

The Rules Engine disclosed in the present application provides a complex system that makes decisions on a variety of different kinds of transactions, e.g. purchase and sales of securities, movement of monies and securities, account transfers, etc. The innovation relates to the ability of the Rules Engine to make decisions pre-transaction execution, for example, based on compliance, risk and/or credit related determinations to facilitate automatic approval for straight through processing of transactions in an automated environment while mitigating risk by applying a consistent set of criteria against transactions but for providing clear information to the originator or approver in the event further intervention is required, e.g. when a manual approval by a user is necessary for a particular transaction that may not satisfy criteria for automatic approval. As disclosed, many of the rules utilize complex calculations and automated verification protocols and some of the rules are parameter driven to allow for configurable setup taking into consideration the size and complexity of a firm or its business model. The disclosed Rules Engine also provides flexible configuration controlled by the individuals responsible for enforcing the requirements within an organization, e.g. through user setting of scope of rule applicability and/or user setting of rule outcomes or parameters.

The rules engine denotes its decision and based upon the outcome selected for the rule(s) determines the disposition of the order or asset transfer, for each received transaction. The disclosed possible outcomes include automatic approval for straight through execution, and user approval required (the order requires human intervention by a person other than the originator regarding the rule violation before proceeding or rejecting, and the disclosed system provides a description of what the approver should be mindful of in approving or rejecting order request).

In the approval required outcome, for example, the order/transaction processing section forwards the order or asset transfer to the broker/dealer or the funds custodian indicating that there is a potential issue with the order, displays the message(s) as to the rule(s) that have been violated and allows the user to either approve the order for execution or decide not to proceed with the transaction. All steps in the transaction are then denoted for audit trail and related record retention purposes. As noted above, independent claims 6 and 31, both include recitations relating to the automatic approval outcome with respect to a first transaction and the manual approval required outcome with respect to a second transaction.

The disclosed outcomes also include stop (order outright rejected with the system providing the originator with a reason), and warning (the rule violation requires acknowledgement or rejection by the originator before proceeding and the system provides a description of what the originator should be mindful of before proceeding with or rejecting the order request). Recitations relating to the stop and warning outcomes appear in dependent claims, e.g. claims 29, 30, 39 and 40.

By comparison, Stein's system is a post-transaction intelligent collector and normalizer of information, largely related to customer data, transaction data and documentation. For example, Stein's system identifies relationships between a financial service provider, its clients and third parties (see Abstract). The system has with it a document library (e.g. 317 in FIG. 3) that allows for documentation to be stored and indexed related to that client, counterparty or transaction. The system implements a rules based process for knowing what type of documentation is required depending on the transaction or jurisdiction and for transferring it to another party in the transaction if required. Attention is directed to column 6, lines 41-65. The system also knows if client disclosures are required depending on the transaction or jurisdiction

and facilitates such delivery to the client. Attention is directed to column 5, lines 3-23. Stein also controls access to stored data/documentation. Attention is directed to column 7, lines 1-28. Although, Stein applies rules to a variety of different system functions, Stein does not apply rules to transactions to determine whether or not to execute the order contained in the respective received transaction, and as a result, there is no subsequent forwarding of a transaction regarding an order or asset transfer for execution/fulfillment or forwarding for manual approval of a transaction based on the outcome of the rules application decision. For example, Stein determines what documents a client must execute for a particular transaction (column 6, lines 46-51), but Stein does not determine whether or not the transaction should be executed or sent for manual approval. Hence, Stein does not in fact satisfy the last three paragraphs of either of the pending independent claims. Pointedly, none of the sections of Stein cited in the latest Action teaches determining whether or not to execute a transaction for fulfillment or the attendant automatic approval with forwarding for execution or forwarding for manual approval, depending on the individual results of such a determination with respect to different transactions. Applicants further submit that Stein does not teach the processing determination and attendant processing as relates to a warning outcome or an actual stoppage outcome, as recited in dependent claims 29, 30, 39 and 40.

The Office Action alleges that it would have been obvious “to have used Stein to produce Applicant’s invention of a method, system, device, apparatus and program storage device for processing a transaction containing an order for execution.” However, this explanation does not clearly acknowledge the differences between the claimed subject matter or identify any prior art knowledge or teaching that would make up for the distinctions. To support the allegation of

obviousness, the statement in the rejection cites to column 2 lines 18-21 of Stein. The cited portion of Stein, however, merely states:

It is another object of the present invention to provide a database access system that employs a specific protocol to permit a continuous processing environment.

It is respectfully submitted that such a vague general statement of a continuous processing objective would not lead one of skill in the art to modify Stein so as to meet either of Applicants' independent claims.

As a further distinction, both independent claims 6 and 30 require that a rule has an assigned a level of scope of application selected from a plurality of preset levels, where each preset level of scope of application specifies a scope of source of transactions to which the rule should apply. The intent is that a rule having the assigned level may be applied to all transactions from a source, where transaction level and/or source fall within the specified scope. In the example mentioned in Applicants' abstract, rules applicable to the account level are processed before rules applicable to the registered representative, office or firm. Each of the independent claims also requires that the assigned level of application for the rule is adjustable, from a first one of the preset levels of application to a second one of the preset levels of application, based on a user setting. For example, individual broker-dealer firms may each configure rules applicable to their own firms independently of rules applicable to any other firm serviced by the rules engine (see abstract of the present application). Execution of an order or asset transfer requested in a received transaction is dependent on the application of the rule(s) to the transaction. It is respectfully submitted that neither Stein nor the allegedly obvious modification of Stein proposed in the rejection of claim 6 would satisfy the independent claim requirements regarding a rule having one of a plurality of levels of scope of application including transaction source, assigned to the rule from among a number of preset levels based on a user

setting. Contrary to the assertion in the most recent Action, Stein does not disclose such a user settable scope of applicability for the rules with regard to transaction source.

Stein discloses a system for integrating and structuring the relationships of a financial services provider (FSP) with its clients and with third parties (counterparties) with which the FSP transacts business. Each entity with which the FSP transacts business as well as each of the transacting entities internal to the FSP are assigned a unique, non-intelligent identifier (CCID), and a relationship is established between each identifier and at least one other entity likewise identified. The system allows the FSP's users to seamlessly access information and transact business with all entities. Attention is directed to the abstract. The text of the Stein patent does mention a number of rules, and the rules are hierarchical (see e.g. 2, lines 36-42; and column 3, lines 29-39). However, Applicants maintain that Stein does not actually disclose that a transaction approval/disapproval rule is assigned a level of scope of applicability regarding transaction source, from a plurality of preset levels of scope of applicability, based on a user setting.

In response to a similar argument in the preceding response, the new Action cites to column 3, line 36 and to column 4, lines 43-65, for alleged support for the proposition that Stein discusses scope of applicability based on transaction source and that such a level of scope of applicability is set by the user. Applicants respectfully disagree. The text at line 36 of column 3 of Stein merely states that the set of rules are hierarchical (an element of the system is a “rules hierarchy”). The text in column 4, lines 43-65, reads as follows:

Still considering the client of the FSP, a particular type of relationship between the client (who has a unique CCID) and every other entity with which the client has a financial connection is created. Example of typical relationships between a counterparty or FSP and a client can include one of the following types: a money manager; a legal owner; a counterparty; an introducing firm; a

guarantor; a pending allocation (for money managers); and an anonymous allocation (for money managers).

From the CCIDs and the relationships, a Profile can be derived for any entity assigned a CCID. Typically, such Profiles will be created for client accounts, but can include any of the entities for which a given system allows CCIDs to be assigned. For example, in the instance that a client has security holdings managed by the FSP and also invests in a counterparty's mutual fund, the client's Profile will include the client's CCID, the FSP's CCID, and the counterparty's CCID. Thus, the Profile allows the FSP to access financial relationships for which it is responsible without reference to whether the relationships include clients, relative/dependents, counterparties, and the FSP or an internal entity thereof. Preferably, the Profile includes all of the relationships in which any particular CCID participates.

Such a disclosure of relationships of various entities with respect to clients and client or other entity profiles may suggest some processing based on the particular entity involved, such as access to other parties relationships ("the Profile allows the FSP to access financial relationships for which it is responsible without reference to whether the relationships include clients, relative/dependents, counterparties" in the quotation above) or to trigger certain related reports or filings (see also column 5, lines 6-23). Stein's identity based access controls and/or reporting requirements, however, do not meet claim requires regarding applying one or more rules for determining whether or not to execute an order or asset transfer in a transaction or the associated requirements for scope of applicability based on source for such order/transaction execution rules. Allegations to the effect that Stein somehow meets the determining requirements of the previous claim set are in error, and there appears to be no allegation that modification of Stein on this point would have been obvious. Hence, even if Stein is somehow modified as proposed in the art rejection of claim 6, the result would still not meet the requirement for determining whether or not to execute a transaction or the attendant requirements for user settable scope of applicability based on source for such rules.

In view of the above discussed distinctions of each of Applicants' independent claims over Stein, the claims as a whole patentably distinguish over the art applied in the Office Action.

The initial rejection of claims 6, 22 and 24 over Stein did not specifically identify the differences between the claimed subject matter or explain how one of skill in the art would modify Stein to achieve the claimed subject matter. Instead, the rejection only generally notes that Stein does not disclose the claimed subject matter (last paragraph of page 2 of the detailed action) but concludes that it would have been obvious to use "Stein to produce Applicant's invention" (third full paragraph on page 3 of the detailed action). The rejection leaps to this startling conclusion without further analysis of how to modify Stein and without any supporting explanation of knowledge in the art that would teach any specific differences of the claims over Stein. Such reasoning clearly fails to meet the legal requirements for a *prima facie* showing of obviousness needed to support a patentability rejection under 35 U.S.C. §103.

Obviousness is a question of law based on underlying factual inquiries. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (19966). The factual inquiries enunciated by the *Graham* Court are as follows: (1) Determining the scope and content of the prior art; (2) Ascertaining the differences between the claimed invention and the prior art; and (3) Resolving the level of ordinary skill in the pertinent art. To meet these legal requirements for a rejection on obviousness grounds, the Examiner must particularly point out the differences of the claims over the nearest prior art (Stein in this case) and the source of the secondary teaching(s) with regard to each identified distinction. The art rejection of claim 6 over Stein fails to provide the requisite explanation of the distinctions and secondary teachings, instead merely substituting the Examiner's conclusions that it would have been obvious to use the disclosure of Stein to produce Applicant's invention.

Furthermore, any rejection or holding of lack of patentability on obviousness grounds must clearly set forth the reasoning or “rational underpinning” that leads to the conclusion of obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396, 127 S. Ct. 1727, 1741 (2007) (explaining that obviousness determinations must have some rational underpinning); and *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008) citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (holding that an expert report was insufficient on issue of obvious because it lacked an articulated reasoning with some rational underpinning to support the legal conclusion of obviousness). A general allegation that “it would have been obvious to an ordinary practitioner...to have used the disclosure of Stein to produce Applicant’s invention” does not meet this standard for a reasonable explanation of the rationale leading to the conclusion of obviousness. For example, a desire to create a unified infrastructure for control and data transfer to a plurality of functional and task specific applications, as alleged in the rejection, would not suggest modification of Stein to determine whether or not to execute the order or asset transfer contained in the respective received transaction or to allow user setting of source-based scope of applicability of the rules, as in Applicants’ independent claims.

Since the rejection of claim 6 does not make the requisite showing under *Graham* and does not provide the rational underpinning for the conclusion of obviousness required by *KSR*, the rejection does not provide a *prima facie* case of obviousness under the relevant legal standards. Hence, at least for this reason, the rejection is improper and should be withdrawn.

The remarks addressing arguments of patentability (bottom of page 6 of the Detailed Action) also allege that it would have been obvious “to an ordinary practitioner of the art at the time of Applicant’s invention, using his personal knowledge of how the financial asset trading and management industry works, to apply all the appropriate rules ... and to make appropriate

revisions over time through an authorized user.” However, there is no evidence to support this conclusion. The cited sections of Stein, as quoted and discussed above, do not support this proposition. For example, the cited sections of Stein deal with other types of data processing functions, such as access control and/or notification of needed documents or government filings. They do not even deal with a rule-based determination of whether or not to execute the order contained in the respective received transaction. The Examiner does not cite any specific evidence in support of the allegation regarding an ordinary practitioner’s personal knowledge of how the financial asset trading and management industry works. If the Examiner intends to continue to rely on general knowledge or considers now taking Official Notice on the point, Applicants submit that the Examiner must present supportive evidence as to exactly what prior knowledge of the financial industry is most relevant and might lead to the modification proposed in the rejection of the independent claims. The burden falls on the Office, and thus on the Examiner, to present clear factual evidence supporting all necessary elements of the *prima facie* case of obviousness. This includes the factual findings as to the knowledge in the art as well as the reason(s) or rationale for combining or modifying the art as proposed in the obviousness rejection. Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. Attention is directed to *In re Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434 (Fed. Cir. 2002) (obvious determination vacated for lack of evidentiary support for conclusory statements regarding obviousness to select and combine); and *In re Zurko*, 258 F.3d at 1386 (deficiencies of the cited references cannot be remedied by general allegations of “basic knowledge” or common sense). General allegations can not substitute for the requisite evidence needed to support a *prima facie* case of obviousness. In this case, if the Examiner believes that the general knowledge in the art of rules engine computer systems for financial asset trading and

management is more specific to the issues of Applicants' claims than Stein, then the burden rests squarely with the Examiner to articulate both the purported relevant knowledge and the basis for his position that such detailed knowledge was common prior to Applicants' invention. If the knowledge was so widely available in the relevant computer system art at the time (e.g. prior to Applicants' April 7, 2000 priority date), then the Examiner should come forward with truly relevant prior art evidence on the key points, to allow Applicants a fair opportunity to consider and respond to the relevant evidence and/or to make an appropriate record in the event that the case should go up on Appeal. Unless the general knowledge on point is capable of instant and unquestionable demonstration as being well-known (Manual of Patent Examination Procedure, Rev. 6, Sept. 2007 §2144.03A), reliance on general knowledge without documentary evidence is inappropriate. For this additional reason, the rejection over Stein should be withdrawn.

Since the basic rejection over Stein does not meet the requirements of the independent claims and should be withdrawn for lack of evidence or reasonable underpinning, the rejection of dependent claims 7-13 also does not lead to a conclusion that any of Applicants' pending claims are unpatentable over the art.

In addition to the distinctions/errors noted above with regard to the basic rejection of claim 6 over Stein, it is respectfully submitted that the allegations of prior art admissions in the latest Action, as well as the related earlier taking of Official Notice on corresponding points in the preceding Action, are inappropriate. Applicants have not conceded or admitted that the points raised with regard to claims 7-13 were all known in the art prior to Applicants' invention. The previous response did in fact challenge the taking of Official Notice, particularly with regard to issues relating to prior art knowledge of levels of scope of application to a specific account, a specific registered representative, a specific office, a specific firm, and a global level. In view of

that challenge, the rationale expressed on pages 2 and 3 of the latest Detailed Action for converting Official Notice into prior art admissions is clearly in error. Applicants maintain that use of Official Notice is not an appropriate substitute for evidence in this case. If there is some evidence on so many relevant claim points, it is incumbent on the Examiner to come forward with the evidence, to allow Applicants a meaningful opportunity to respond and to create a complete record for purposes of Appeal if necessary (see e.g. *Lee* and *Zurko* cited above). The vague reliance on Official Notice and/or attempted conversion thereof to some kind of admission does not provide the requisite level of evidence to support a *prima facie* case of obviousness, with respect to any of Applicants' independent or dependent claims. Hence, the rejection over Stein and Official Notice also is improper and should be withdrawn.

For the reasons outlined above, it is respectfully submitted that claims 6-13 and 29-40 all patentably distinguish over the various modifications/combinations of art applied in the latest Office Action and that the art rejections should be withdrawn.

Conclusions

Upon entry of the above claim amendments, claims 6-13 and 29-40 are active in this application, all of which should be patentable over the art applied in the Action. Applicants therefore submit that all of the claims are in condition for allowance. Accordingly, this case should now be ready to pass to issue; and Applicants respectfully request a prompt favorable reconsideration of this matter.

It is believed that this response addresses all issues raised in the June 3, 2008 Office Action. However, if any further issue should arise that may be addressed in an interview or by an Examiner's amendment, it is requested that the Examiner telephone Applicants' representative at the number shown below.

To the extent necessary, if any, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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